Bloodborne Pathogens

Introduction

- Approximately 5.6 million workers in health care and other facilities are at risk of exposure to bloodborne pathogens such as human immunodeficiency virus (HIV – the virus that causes AIDS), the hepatitis B virus (HBV), and the hepatitis C virus (HCV)
- OSHA's Bloodborne Pathogens standard prescribes safeguards to protect workers against the health hazards from exposure to blood and other potentially infectious materials, and to reduce their risk from this exposure

Who is covered by the standard?

- All employees who could be “reasonably anticipated” as the result of performing their job duties to face contact with blood and other potentially infectious materials
- “Good Samaritan” acts such as assisting a co-worker with a nosebleed would not be considered occupational exposure

Some Workers Who are at Risk

- Physicians, nurses and emergency room personnel
- Orderlies, housekeeping personnel, and laundry workers
- Dentists and other dental workers
- Laboratory and blood bank technologists and technicians
- Medical examiners
- Morticians
- Law enforcement personnel
- Firefighters
- Paramedics and emergency medical technicians
- Anyone providing first-response medical care
- Medical waste treatment employees
- Home healthcare workers

How does exposure occur?

- Most common: needlesticks
- Cuts from other contaminated sharps (scalpels, broken glass, etc.)
- Contact of mucous membranes (for example, the eye, nose, mouth) or broken (cut or abraded) skin with contaminated blood

Exposure Control Plan

- Identifies jobs and tasks where occupational exposure to blood or other potentially infectious material occurs
- Describes how the employer will:
  - Use engineering and work practice controls
  - Ensure use of personal protective equipment
  - Provide training
  - Provide medical surveillance
  - Provide hepatitis B vaccinations
  - Use signs and labels

Exposure Control Plan

- Written plan required
- Plan must be reviewed at least annually to reflect changes in:
  - tasks, procedures, or assignments which affect exposure, and
  - technology that will eliminate or reduce exposure
- Annual review must document employer's consideration and implementation of safer medical devices
- Must solicit input from potentially exposed employees in the identification, evaluation and selection of engineering and work practice controls
- Plan must be accessible to employees

Universal Precautions

- Treat all human blood and certain body fluids as if they are infectious
- Must be observed in all situations where there is a potential for contact with blood or other potentially infectious materials

Engineering and Work Practice Controls

- These are the primary methods used to control the transmission of HBV and HIV
- When occupational exposure remains after engineering and work practice controls are put in place, personal protective equipment (PPE) must be used

Engineering Controls

These controls reduce employee exposure by either removing the hazard or isolating the worker. Examples:

- Sharps disposal containers
- Self-sheathing needles
- Safer medical devices
  - Needleless systems
  - Sharps with engineered sharps injury protections

Safer Medical Devices

- *Needless Systems:* a device that does not use needles for the collection or withdrawal of body fluids, or for the administration of medication or fluids
- *Sharps with Engineered Sharps Injury Protections:* a non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident

Work Practice Controls

These controls reduce the likelihood of exposure by altering how a task is performed. Examples:

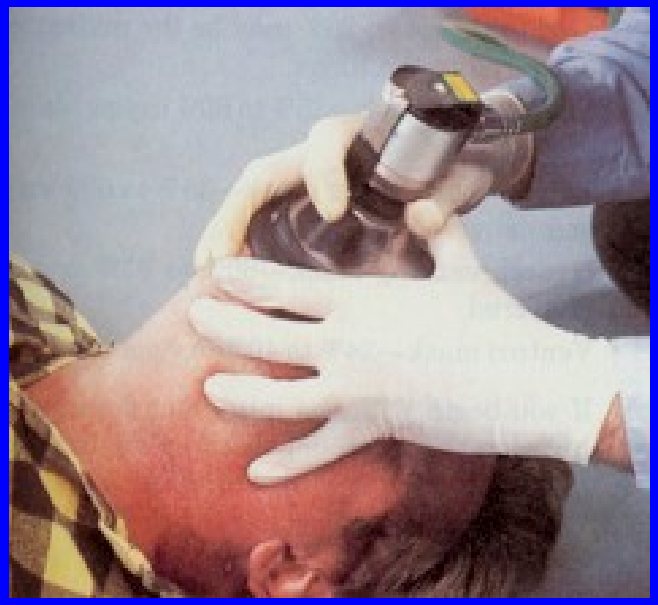
- Wash hands after removing gloves and as soon as possible after exposure
- Do not bend or break sharps
- No food or smoking in work areas

Personal Protective Equipment

- Specialized clothing or equipment worn by an employee for protection against infectious materials
- Must be properly cleaned, laundered, repaired, and disposed of at no cost to employees
- Must be removed when leaving area or upon contamination

Examples of PPE

- Gloves
- Gowns
- Face shields
- Eye protection
- Mouthpieces and resuscitation devices



Housekeeping

Must develop a written schedule for cleaning and decontamination at the work site based on the:

- Location within the facility
- Type of surface to be cleaned
- Type of soil present
- Tasks or procedures being performed

Housekeeping (cont'd)

Work surfaces must be decontaminated with an appropriate disinfectant:

- After completion of procedures,
- When surfaces are contaminated, and
- At the end of the work shift

Regulated Waste

Must be placed in closeable, leak-proof containers built to contain all contents during handling, storing, transporting or shipping and be appropriately labeled or color-coded.

Laundry

- Handle contaminated laundry as little as possible and use PPE
- Must be bagged or containerized at location where used
- No sorting or rinsing at location where used
- Must be placed and transported in labeled or color-coded containers

Hepatitis B Vaccination Requirements

- Must make available, free of charge at a reasonable time and place, to all employees at risk of exposure within 10 working days of initial assignment unless:
  - employee has had the vaccination
  - antibody testing reveals immunity
- The vaccination must be performed by a licensed healthcare professional

Hepatitis B Vaccination Requirements (cont'd)

- Must be provided even if employee initially declines but later decides to accept the vaccination
- Employees who decline the vaccination must sign a declination form
- Employees are not required to participate in antibody prescreening program to receive vaccination series
- Vaccination booster doses must be provided if recommended by the U.S. Public Health Service

What to do if an exposure occurs?

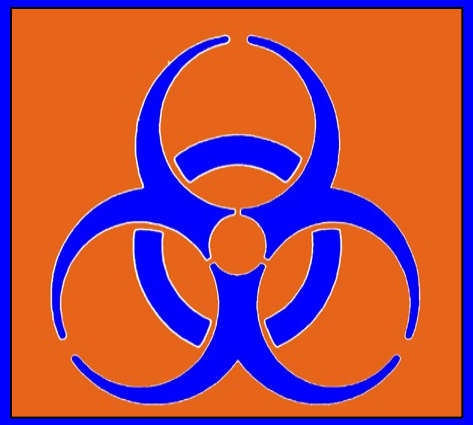
- Wash exposed area with soap and water
- Flush splashes to nose, mouth, or skin with water
- Irrigate eyes with water or saline
- Report the exposure
- Direct the worker to a healthcare professional

Post-Exposure Follow-Up

- Document routes of exposure and how exposure occurred
- Record injuries from contaminated sharps in a sharps injury log, if required
- Obtain consent from the source individual and the exposed employee and test blood as soon as possible after the exposure incident
- Provide risk counseling and offer post-exposure protective treatment for disease when medically indicated in accordance with current U.S. Public Health Service guidelines
- Provide written opinion of findings to employer and copy to employee within 15 days of the evaluation

Biohazard Warning Labels

- Warning labels required on:
  - Containers of regulated waste
  - Refrigerators and freezers containing blood and other potentially infectious materials
  - Other containers used to store, transport, or ship blood or other potentially infectious materials
- Red bags or containers may be substituted for labels



Training Requirements

- Provide at no cost to employees during working hours
- Provide at time of initial assignment to a job with occupational exposure and at least annually thereafter
- Additional training needed when existing tasks are modified or new tasks are required which affect the worker's occupational exposure
- Maintain training records for 3 years

Training Elements

- Copy of the standard
- Modes of transmission
- Site-specific exposure control plan
- Hazard recognition
- Use of engineering controls, work practices and PPE
- Live question and answer sessions

Medical Recordkeeping Requirements

- Employee's name and social security number
- Employee's hepatitis B vaccination status
- Results of examinations, medical testing, and post-exposure evaluation and follow-up procedures
- Health care professional's written opinion
- Information provided to the health care professional
- Employee medical records must be kept confidential and not disclosed or reported without the employee's written consent (unless required by law)
- Medical records must be maintained for duration of employment plus 30 years according to OSHA's rule governing access to employee exposure and medical records

Sharps Injury Log

- Employers must maintain a sharps injury log for the recording of injuries from contaminated sharps
- The log must be maintained in a way that ensures employee privacy and must contain, at a minimum:
  - Type and brand of device involved in the incident
  - Location of the incident
  - Description of the incident

Summary

- OSHA's Bloodborne Pathogens standard prescribes safeguards to protect workers against the health hazards from exposure to blood and other potentially infectious materials, and to reduce their risk from this exposure
- Implementation of this standard not only will prevent hepatitis B cases, but also will significantly reduce the risk of workers contracting AIDS, Hepatitis C, or other bloodborne diseases